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PATENT SPECIFICATION

Convention Date (France) : Dec. 9, 1927.

301,900

Application Date (In United Kingdom) : Nov. 20, 1928. No. 34,713 / 28.

Complete not Accepted.

COMPLETE SPECIFICATION.

Improvements in Crepe Rubber Soles.

We, SOCIÉTÉ FINANCIÈRE DES CAOUTCHOUCS, a company incorporated under the laws of Belgium, of 13, Rue Notre Dame des Victoires, Paris, France, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to the manufacture of soles for footwear from crepe rubber, that is to say from the product obtained without transformation by the coagulation of the latex, and embraces the products obtained in addition to the processes employed for their obtention.

In addition to the numerous advantages present in the customary crepe soles which render their employment daily more extensive, there is present the disadvantage and even danger that they are exceptionally slippery on certain surfaces such as glass plates, damp asphalt and the like.

In accordance with the present invention this disadvantage is completely eliminated by incorporating in that portion of the latex adapted to contact with the ground when in use, certain products which increase in the desired proportion the coefficient of friction of the crepe.

Amongst the bodies suitable for fulfilling this purpose, there may be used various abrasive products, such as silica, pumice stone, carborundum, etc. reduced to a fine powder, without in any way ceasing to possess an actual granular form. An impalpable powder does not give complete results. It is also advantageous to use the lightest possible abrasive, amongst those which are used, so as to minimise the increase in weight which its addition entails.

Hereafter is described a method of operation, by way of example, for the manufacture of a sole in accordance with the invention. Reference will be made for convenience to the accompanying

drawing, showing diagrammatically a section of the product obtained.

In order to obtain a total thickness of 8 mm. there is prepared a first sheet of crepe 1 by the usual processes, that is to say, by simple coagulation of the latex. This layer or sheet, adapted to be applied directly to the footwear, will have, for example, a thickness of 5 mm.

There is then prepared a second sheet 2 by mixing in substantially equal proportions, liquid latex with the abrasive powder in sufficiently large grains (silica, pumice, carborundum, sand, etc.). The latex is then caused to coagulate whilst the mixture is constantly agitated so that it remains as homogeneous as possible. When a sufficient consistency has been acquired it is spread out into a sheet in such a manner as to obtain a thickness of about 3 mm.

The two sheets are then secured together by simple pressure; in order to secure them together the coagulation of the latex should be carried out in such a manner for each that when placed in contact they are preferably still sufficiently fresh so as to stick together without solvent. The sole or sheet obtained by this assemblage has, for a sufficient thickness, in the region adapted to bear on the ground, a sufficiently large proportion of the abrasive body with a high coefficient of friction so as no longer to slip.

In the case where the abrasives used for the outer layer of the sole produces a coloration very different from that of the unadulterated crepe, it is possible by means of suitable colouring agents, to impart the same tint to this portion of the sole so as to obtain a uniform colour effect.

It will be understood that the invention is not limited to the details of manufacture described by way of example; these limits will not be departed from, for instance, by incorporating the abrasive powder in the latex after partial coagulation and processes different from that

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[Price 1/-]

which has been described will without doubt lead to the formation of sheets, whilst sheeting operations capable of crushing the abrasive grains will produce an acceptable though less perfect result.

It is also possible, without departing from the invention, to allow the two parts of the sole to coagulate without securing them together before the complete coagulation, and then to secure them together by a solvent, but the cost of production would be increased without any advantage; the final results would still be that arrived at by the invention, obtained by the same essential means.

Finally the manufacture could be simplified, should there be no objection to the weight, by making a homogeneous sole with the abrasive throughout its thickness.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:

1. A process for the manufacture of crepe rubber sheets for use as footwear soles, consisting in impregnating the latex during coagulation with an abrasive granular powder, whereby to produce a non-slip tread to said sheeting.

2. A process for the manufacture of crepe rubber sheets for use as footwear soles, consisting in preparing a crepe

sheet by simple coagulation of the latex, and then coagulating a quantity of latex with an approximately equal quantity of abrasive granular powder, the mixture being constantly agitated during coagulation and then spread to form a second sheet which is thereafter attached to said first sheet to form a non-slip tread.

3. A process for the manufacture of crepe rubber sheets according to the preceding claim, wherein the sheets are secured together by pressure before their complete coagulation, whereby necessity for use of a binding solvent is eliminated.

4. A process according to any of the preceding claims 1 to 3, wherein the abrasive substance comprises silica, pumice or glass.

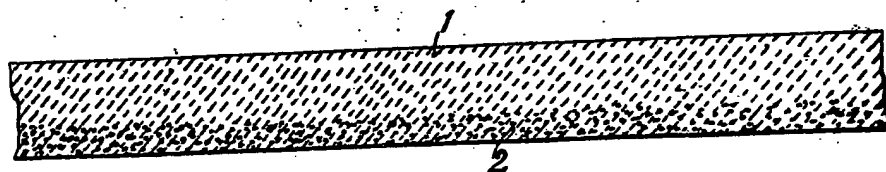
5. A crepe rubber sole having its tread portion impregnated with granular particles of an abrasive body, whereby the tread is rendered non-slipable.

6. A crepe rubber sole constituted and arranged for use substantially as described and illustrated.

7. A process for the manufacture of crepe rubber sheeting substantially as described.

Dated the 16th day of November, 1928.

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